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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/722,940	11/27/00	HIRAOKA Y	30012740-02

MMC2/1002
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EXAMINER	
BRAUN, F	
ART UNIT	PAPER NUMBER
2852	

DATE MAILED: 10/02/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

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Office Action Summary

Application No.	Applicant(s)
09/722,940	Hiraoka et al
Examiner	**Group Art Unit**
Fred L Braun	2852

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

☑ Responsive to communication(s) filed on November 27, 2000.

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

☑ Claim(s) 1 – 10 is/are pending in the application.

Of the above claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☑ Claim(s) 1, 2, 4–7, 9 and 10 is/are rejected.

☑ Claim(s) 3 and 8 is/are objected to.

☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)–(d)

☑ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)–(d).

☑ All ☐ Some* ☐ None of the:

☑ Certified copies of the priority documents have been received.

☐ Certified copies of the priority documents have been received in Application No. _____.

☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____.

Attachment(s)

☐ Information Disclosure Statement(s), PTO–1449, Paper No(s). _____

☐ Interview Summary, PTO–413

☑ Notice of Reference(s) Cited, PTO–892

☐ Notice of Informal Patent Application, PTO–152

☐ Notice of Draftsperson's Patent Drawing Review, PTO–948

☐ Other _____

Office Action Summary

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1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

2. The abstract of the disclosure is objected to because it uses the expression "The present invention discloses"; and fails to set forth a concise statement of that subject matter which applicants consider to be their contribution to the art to which the invention pertains. More specifically, the abstract recites substantially verbatim the limitations of base claim 1, which claim is not considered to be patentable over the prior art for the reasons set forth hereinbelow. Correction is required. See MPEP § 608.01(b).

3. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:
(1) if a machine or apparatus, its organization and operation;
(2) if an article, its method of making;
(3) if a chemical compound, its identity and use;
(4) if a mixture, its ingredients;
(5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 250 words. It is important that the abstract not exceed 250 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The drawings are objected to because the lead lines for reference numerals '50" and "54", respectively, do not extend to the element they represent to clearly identify said element, as required by 37 CFR 1.84 (q); the use of reference numeral "25" in Figure 3 for one of the corona charging devices is objected to as not being in compliance with 37 CFR 1.84(p)(4). Also, the arrow which is mentioned in the specification as depicting the direction of movement of the belt 12 is not shown in the drawings as required by 37 CFR 1.84(p)(5). Correction is required.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Zin or Hansen.

Element 11 (Fig. 2) of Hansen is the claimed developing unit having an elongated opening 41 (Fig. 2) for applying developing liquid to the electrostatic latent image carrier 13 (Fig. 2) and element 54 (Fig. 2) the air duct around the elongated opening 41 of the developing unit which impinges air at a predetermined pressure upon the developing liquid to prevent the excess developing liquid from escaping from the developing gap or region formed by the developing unit 11. With respect to the patent to Zin, element 35 (Fig. 2) of same is the elongated opening in the developing unit 11 (Fig. 1) which applies developing liquid to the latent image carrier 13 (Fig. 2) and element 43 the air duct around said elongated opening which impinges air at a predetermined pressure on the developing liquid to prevent excess developing liquid from escaping from the developing gap or region formed by the developing unit.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was

made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

10. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zin or Hansen.

It is submitted that it is obvious to one having ordinary skill in the art that the air duct of Hansen must inherently have a means for controlling the air pressure since the air may be supplied at less than 5 pounds per square inch (column 4, lines 31-38). With respect to Zin, it is further submitted that the air duct of same inherently has a means for controlling the air pressure since the air is supplied at approximately 5 to 20 pounds per square inch (column 3, lines 10-19).

11. Claims 4-7, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zin or Hansen as applied to claim 1 and claim 2, respectively, above, and further in view of Caruthers et al.

The patent to Caruthers et al shows that it is well known in the art to provide a liquid electrophotographic developing apparatus with a plurality of developing units 15A, 15B, 15C (Fig. 1) for supplying different colored developing liquids via an elongated opening 24 (Fig. 1) to the latent image on the image carrier 100 (Fig. 1) to develop said image, and that it is also known to provide the developing apparatus with a sensor 40 (Fig. 1) for controlling the flow of liquid toner to said elongated opening 24 of same by controlling the opening and closing of the liquid supplying values 16A, 16B, 16C (Fig. 1) of same.

Therefore, to provide the developing apparatus of Zin or Hansen with a plurality of developing units for supplying different colored developing liquids to the elongated opening of

same in order to develop the latent image on the image carrier and a sensor for controlling the opening and closing of the liquid supplying valves for same, as suggested by Caruthers et al, would be an obvious modification of the prior art to one having ordinary skill in the art at the time applicants invention was made.

12. The patents to Day, Denton et al and Hiraoka et al, respectively, are cited of interest to further show the obviousness of providing an electrophotographic developing apparatus with a plurality of different colored liquid developer units; and the patents to Clark and Leedom, respectively, are cited of interest to further show the use of electrodes for controlling the flow of liquid toner from an elongated opening.

13. Claims 3 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

14. Any inquiry concerning this communication should be directed to Fred L. Braun at telephone number (703) 308-0128.

Fred L Braun

FRED L BRAUN
PRIMARY EXAMINER
ART UNIT 2852

Braun/nt

9/26/01